Public Education for Work Zone Safety

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Motivation & Objective

Motivation: Improve work zone driver safety in Indiana through driver education and public awareness campaigns

Objective: Enhance driver education through:
• Preparing educational materials to be incorporated into driver’s education or training curriculum.
• Designing a public awareness campaign

Research Framework

Campaign Messaging & Design

- ARIES
- NHTSA
- FHWA
- Fact sheets

Design Educational Materials

Design Public Awareness Campaign Messages

Develop and Distribute a Survey

Peer reviewed articles, Manuals, Driver’s
Commercial driver’s Motorcycle operator’s Training curricula

Different Guidance levels:
• Limited
• Moderate
• Full

- Crash Data Analysis
- Document Analysis

Road class

Private vehicles: 16%
Commercial vehicles: 14%

Type of construction zone

Private vehicles: 20%
Commercial vehicles: 11%

Crash Data

Collision manner

Private vehicles

1. Following closely
2. Unsafe lane movement
3. Failure to yield ROW
4. Distracted driving

Commercial vehicles

1. Unsafe lane movement
2. Following closely
3. Unsafe speeding
4. Distracted driving

Implication: Message writing

Survey Analysis

Aim: pre-test the campaign messages for clarity, relevance, comprehension, etc.

• Appropriateness for target audience
• Clarity
• Relevance
• Comprehension

Sample: 111 Purdue University students and 358 Indiana Residents

Design: Questions to test the effectiveness of 15 campaign messages.

Three scales were used: Perceived message effectiveness, Perceived self-efficacy, Perceived response efficacy.

Example: “This message made me stop and think”, “This message grabbed my attention” and “This message made me want to quit unsafe speeding”.

These items were rated on a five-point Likert scale: 1 = strongly disagree to 5 = strongly agree.

Analysis revealed that participants overall:

• Perceived all 15 campaign messages to be effective at encouraging safe driving behaviors in Indiana work zones.
• Believed that they could perform the safe driving behaviors recommended by each message.
• Believed that those recommendations would be effective in preventing crashes in Indiana work zones.

Recommendations

This study provides guidance to INDOT on how to measure and evaluate the outcome of public awareness campaigns. In specific, the team recommends the following:

• Dissemination of the campaign messages through billboards, POM signs, at rest areas, on Instagram, and Facebook.
• Adding relevant work zone-related information to the manuals and enhancing the language.
• Adding more questions to the driver test.

Acknowledgement

We would like to thank the SAC members (Michael Lane, Barry Partridge, Jim Sturdevant, Whitney Lisa, Shelby Rivers, Mark Dehn, Dave Boruff, Terri Griffin, and Linda McGrawman- Roberson) for providing us feedback and providing access to the ARIES data.